

fuel electrode, electrolyte, interconnector and air electrode
laminated onto a substrate.--

REMARKS

Status of the Claims

Claims 4-17 are pending in the present application. Claims 1-3 have been cancelled without prejudice or disclaimer of the subject matter contained therein. The basis for claims 5, 7 and 9 includes original claim 3. Claim 4 is supported by original claim 1 and by various portions of the specification.

The phrase "co-sinter type" is based on the integral burning discussion on page 3, lines 16 and 24 of the specification. See also page 5, line 4 from the bottom to page 6, line 4 from the bottom, including especially page 5, last line to page 6, first line, which describes that the interconnector can be burned integrally with the other constituent materials, thus reducing the manufacturing cost. Also see claims 10-17.

With respect to claims 11-17, the specification clearly shows an integral burning method, which is the same as co-sintering. Also see page 33, line 16 to page 34, line 3 of the specification and Figure 44, which shows various materials such as a fuel electrode 12, electrolyte 13, interconnector 14 and

air electrode 15 laminated onto a substrate 11. Then, these materials are co-sintered or integrally burned in order to obtain a fuel battery.

In order to make such a structure, the conventional thermal spraying method requires laborious steps including thermal spraying a material for a fuel electrode onto a substrate 11 to form a fuel electrode 12, then thermally spraying a material for an electrolyte to form an electrolyte 13, then thermally spraying a material for an interconnector to form an interconnector 14, and finally thermally spraying a material for an air electrode to obtain an air electrode 15. The co-sinter type as claimed allows the procedure to be markedly simplified, thereby increasing work efficiency.

Claim 5 is supported by the description on page 34, lines 4-10 of the specification. Also see Fig. 44(a).

Claim 6 is supported by the description in Example 3 (e.g. Ca derived material), Example 5 (e.g. Sr-derived material), Example 7 (Ca-derived material), and Example 8 (Ca-derived material, Sr-derived material and Ba-derived material).

Claim 8 corresponds to claim 6 in which component A is Mg. See Example 2 (Mg-derived material) and Example 7 (Mg-derived material).

Prior Art Rejections

Claims 1 and 2 are rejected by the Examiner under 35 U.S.C. 102(b) as being anticipated by Soma et al for the reasons set forth in paragraph 2 of the Office Action. Claim 3 is rejected by the Examiner under 35 U.S.C. 103(a) for the reasons set forth in paragraph 4 of the Office Action. These rejections are respectfully traversed. Reconsideration and withdrawal thereof are requested.

The interconnector of the Soma et al. reference is formed by thermal spraying an interconnector material to form a thermally sprayed film, and then heat-treating (1,250°C or higher) the thermally sprayed film. In contrast, the interconnector of the present invention is a co-sinter type of interconnector formed by coating materials onto a surface (e.g., the surface of a base tube) and sintering them integrally at a high temperature (1,300 to 1,400°C). Thus, the interconnector of the invention is neither anticipated nor obvious over the interconnector of the Soma et al. reference.

The Examiner should further note that the description in column 5, lines 13-18 of the Soma et al. reference excludes Mg. In contrast, claim 8 contains Mg.

In addition, claims 5, 7 and 9, corresponding to original claim 3, clarifies the direction of the current passage. In this

regard, Fig. 44(a) shows the current collection in the vertical direction is advantageous in that high resistance can be avoided by a small thickness. The advantage(s) of the claimed invention is nowhere suggested by the cited reference.

In summary, the amendments to the claims (or more accurately the presentation of the new claims) clearly distinguish the present invention over the teachings of the Soma et al. reference. Therefore, reconsideration and withdrawal of the prior art rejections over the Soma et al. reference are respectfully requested.

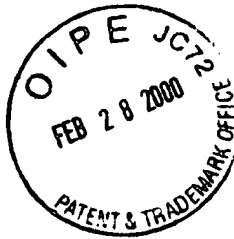
As the above-presented amendments and remarks address and overcome the rejections of the Examiner, withdrawal of the rejections and reconsideration and allowance of the claims are respectfully requested. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Pursuant to 37 C.F.R. § 1.17 and 1.136(a), the Applicants respectfully petitions for a one (1) month extension of time for filing a response in connection with the present application and the required fee of \$110.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP



By 
Marc S. Weiner
Reg. No. 32,181

MSW/cpw

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000